

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Dr. Christoph Charton et al.

Group Art Unit: Unknown

① P T E  
Appln. No. : 10/597,625

(National Stage of PCT/EP2004/013258)

A. Filed : November 23, 2004

Examiner: Unknown

Confirmation No. 3976

For : METHOD FOR THE PRODUCTION OF AN ULTRA BARRIER LAYER SYSTEM

**INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
U.S. Patent and Trademark Office  
Customer Service Window, Mail Stop Amendment  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Sir:

In accordance with the duty of disclosure under 37 C.F.R. 1.56, 1.97, and 1.98, Applicant hereby brings the following information to the attention of the Examiner, which includes information cited and discussed in the specification, the International Search Report and the International Preliminary Examination Report issued in connection with counterpart International Application No. PCT/EP2004/013258. Copies of the International Search Report (in German), and the International Preliminary Examination Report (in German) were enclosed with the papers when entering the National Stage on August 1, 2006. An English language translation of the International Preliminary Examiner Report is being submitted herewith. The Examiner is invited to review these materials to inspect the relevance indicated during international examination with respect to the documents cited therein.

A.S. DE SILVA SOBRINHO et al., "Transparent Barrier Coatings on Polyethylene Terephthalate by Single- and Dual-Frequency Plasma-Enhanced Chemical Vapor Deposition", J. Vac. Sci. Technology, A 16(6), pp. 3190-3198 (Nov/Dec 1998), which is cited and discussed in the specification beginning on page 2, second full paragraph;

R.J. NELSON et al., "Double-Sided QLF Coatings for Gas Barriers", Society of Vacuum Coaters, 34<sup>th</sup> Annual Technical Conference Proceedings, pp. 113-117, (1991), which is cited and discussed in the specification beginning on page 2, third full paragraph;

M. IZU et al., "High Performance Clear Coat Barrier Film", Society of Vacuum Coaters, 36<sup>th</sup> Annual Technical Conference Proceedings, pp. 333-340 (1993), which is cited and discussed in the specification beginning on page 2, third full paragraph;

A.G. ERLAT et al., "Characterisation of Aluminum Oxynitride Gas Barrier Films", Thin Solid Films, Vol. 338, pp. 78-86 (2001), which is cited and discussed in the specification beginning on page 3, first full paragraph;

S. SCHILLER et al., "PVD Coating of Plastic Webs and Sheets with High Rates on Large Areas", Surface and Coatings Technology, Vol. 125, pp. 354-360 (2000), which is cited and discussed in the specification beginning on page 3, second full paragraph;

DE 195 48 160 C1, and family member U.S. Patent No. 6,130,002, which is cited and discussed in the specification beginning on page 4, line 7;

T.A. MILLER et al., "Polymer Multi-Layer Processing of Thin Film Materials", 1999 Materials Research Society, Mat. Res. Soc. Symp. Proc., Vol. 555, pp. 247-254,

which is cited and discussed in the specification beginning on page 4, first full paragraph;

J.D. AFFINITO et al., "Polymer-Oxide Transparent Barrier Layers", 1996 Society of Vacuum Coaters, 39<sup>th</sup> Annual Technical Conference Proceedings (1996) pp. 392-397, which is cited and discussed in the specification beginning on page 4, first full paragraph;

EP 0 815 283 B1, and family member WO 96/28587, which is cited and discussed in the specification beginning on page 5, first full paragraph and was cited in the International Search Report as an "A" category document. In particular the Examiner noted claims 1-9 as relevant to claims 1-27 of the International document.;

S. FUJIMAKI et al., "New DLC Coating Method Using Magnetron Plasma in an Unbalanced Magnetic Field", Vacuum, Vol. 59, pp. 657-664 (2000), which is cited and discussed in the specification beginning on page 5, first full paragraph;

P.E. BURROWS et al., "Ultra Barrier Flexible Substrates for Flat Panel Displays", Displays, Vol. 22, pp. 65-69 (2001), was cited as an "A" category document (i.e., a document relevant to the technological background of the invention). In particular the Examiner noted page 67, paragraph 2 to page 68, paragraph 2 as relevant to claims 1-27 of the International document; and

J.D. AFFINITO, "Hybridization of the Polymer Multi-Layer (PML) Deposition Process", Surface and Coating Technology 133-134, pp. 528-534 (2000), was cited as an "A" category document. In particular the Examiner noted the whole document as relevant to claims 1-27 of the International document.

Applicants also bring to the Examiner's attention the a German Office Action issued in connection with counterpart German Application No. 10 2004 005 313.8-45, mailed December 19, 2005, which cites the following documents. A copy of the German Office Action and English translation of the same is being submitted herewith. The Examiner is invited to review the German Office Action to inspect the relevance indicated during German examination with respect to the documents cited therein.

DE 195 48 160 C1;

J.D. AFFINITO et al., "High Rate Vacuum Deposition of Polymer Electrolytes", J. Vac. Sci. Technol. A 14(3), pp. 733-738 (May/Jun 1996); and

J.D. AFFINITO et al., "Polymer-Oxide Transparent Barrier Layers", 1996 Society of Vacuum Coaters, 39<sup>th</sup> Annual Technical Conference Proceedings (1996) pp. 392-397.

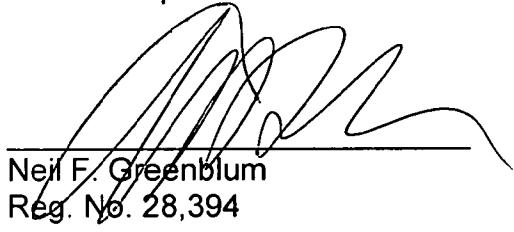
In accordance with 37 C.F.R 1.98, a copy of the U.S. patent is not enclosed herewith. However, if a copy is needed, the Examiner is respectfully requested to contact the undersigned.

Copies of the above-noted documents, except for the U.S. patent, are enclosed together with a duly completed Form PTO-1449. The Examiner is accordingly requested to consider each of these documents, and to make them of record in this application by initialing in the appropriate spaces on the Form PTO-1449. Applicants respectfully request that the Examiner include a copy of the initialed Form PTO-1449 with the next communication from the U.S. Patent and Trademark Office.

In accordance with 37 C.F.R. 1.97(b)(1), this Information Disclosure Statement is filed within three months of the filing date of the application. Accordingly, no fees are required.

Should there be any questions, the Examiner is invited to contact the undersigned at the below listed telephone number.

Respectfully submitted,  
Dr. Christoph Charton et al.

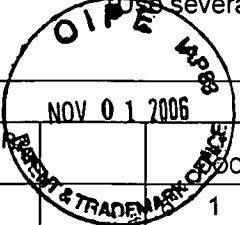


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FORM PTO-1449		U.S. Department of Commerce Patent and Trademark Office			Atty. Docket No. P30086		Application No. 10/597,625	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <small>(Use several sheets if necessary)</small>					Applicants Dr. Christoph CHARTON et al.			
					I.A. Filing Date November 23, 2004		Group Unknown	
 <b>NOV 01 2006</b> <b>U.S. PATENT DOCUMENTS</b>								
EXAMINER INITIAL	SEARCHED & TRADEMAKED	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
/RM/		1 3 0 0 0 2	10/10/00	NEUMANN et al.				
<b>FOREIGN PATENT DOCUMENTS</b>								
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES      NO	
/RM/	1	9 5 4 8 1 6 0	05/07/97	GERMANY				
/RM/		0 8 1 5 2 8 3	06/19/02	EPO				
/RM/	96	/ 0 2 8 5 8 7	09/19/96	WIPO				
<b>OTHER DOCUMENTS</b> (Including Author, Title, Date, Pertinent Pages, Etc.)								
/RM/	1	A.S. DE SILVA SOBRINHO et al., "Transparent Barrier Coatings on Polyethylene Terephthalate by Single- and Dual-Frequency Plasma-Enhanced Chemical Vapor Deposition", J. Vac. Sci. Technology, A 16(6), pp. 3190-3198 (Nov/Dec 1998)						
/RM/	2	R.J. NELSON et al., "Double-Sided QLF Coatings for Gas Barriers", Society of Vacuum Coaters, 34 <sup>th</sup> Annual Technical Conference Proceedings, pp. 113-117, (1991)						
/RM/	3	M. IZU et al., "High Performance Clear Coat Barrier Film", Society of Vacuum Coaters, 36 <sup>th</sup> Annual Technical Conference Proceedings, pp. 333-340 (1993)						
/RM/	4	A.G. ERLAT et al., "Characterisation of Aluminum Oxynitride Gas Barrier Films", Thin Solid Films, Vol. 338, pp. 78-86 (2001)						
/RM/	5	S. SCHILLER et al., "PVD Coating of Plastic Webs and Sheets with High Rates on Large Areas", Surface and Coatings Technology, Vol. 125, pp. 354-360 (2000)						
/RM/	6	T.A. MILLER et al., "Polymer Multi-Layer Processing of Thin Film Materials", 1999 Materials Research Society, Mat. Res. Soc. Symp. Proc., Vol. 555, pp. 247-254						
/RM/	7	J.D. AFFINITO et al., "Polymer-Oxide Transparent Barrier Layers", 1996 Society of Vacuum Coaters, 39 <sup>th</sup> Annual Technical Conference Proceedings (1996) pp. 392-397						
/RM/	8	S. FUJIMAKI et al., "New DLC Coating Method Using Magnetron Plasma in an Unbalanced Magnetic Field", Vacuum, Vol. 59, pp. 657-664 (2000)						
/RM/	9	P.E. BURROWS et al., "Ultra Barrier Flexible Substrates for Flat Panel Displays", Displays, Vol. 22, pp. 65-69 (2001)						
/RM/	10	J.D. AFFINITO, "Hybridization of the Polymer Multi-Layer (PML) Deposition Process", Surface and Coating Technology 133-134, pp. 528-534 (2000)						
/RM/	11	J.D. AFFINITO et al., "High Rate Vacuum Deposition of Polymer Electrolytes", J. Vac. Sci. Technol. A 14(3), pp. 733-738 (May/Jun 1996)						
EXAMINER /Rodney McDonald/				DATE CONSIDERED		02/22/2010		

\*EXAMINER: Initial if citation considered whether or not citation is in conformance with MPEP 609; draw

if not in conformance and not considered. Include copy of this form with next communication to applicant.